

16 March 2004

10/563685

IAP20 Rec'd PCT/PTO 30 DEC 2005

Patent- och registreringsverket
Valhallavägen 136
P.O. Box 5055
S-102 42 STOCKHOLM
Sweden

Our ref: BP106723/TKO/MB/MG

INTERNATIONAL PATENT APPLICATION NO. PCT/FI2003/000529
APPLICANT: NOKIA CORPORATION ET AL.

Dear Sirs,

We enclose herewith the Demand for the above-mentioned international application.

Simultaneously the applicant wishes to avail himself of the provisions of Art. 19 PCT to make minor amendments to the claims. Substantive amendments consist of augmenting original claims 1, 2 and 19 to additionally mention "pilot carriers", as well as adding a new claim 14 which requires the pilot carriers to be scattered pilot carriers. Additionally an unnecessary recitation of "at least" was deleted from what originally was claim 20, and original claims 14-23 were renumbered as claims 15-24 respectively, due to the addition of a new claim 14.

Support for the explicit recitation of pilot carriers is readily found in the paragraph beginning on line 23 of oage 8 in the application as filed. The same paragraph also offers support for the fact that the pilots are scattered pilots, which is the subject of the added new claim 14.

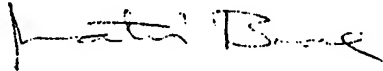
The reason for introducing these amendments to the claims is the applicant's wish to further differentiate the invention as claimed from the teachings of the reference publications WO 01/69878 A1 and EP 0 837 582, which do not contain any reference to using pilot carriers as the basis for defining an energy in the received signal. Quite to the contrary, WO 01/69878 A1 suggests using the unused carriers for power estimation, which is not comparable to using pilot carriers due to the completely different signal content of the two.

10/563185

The applicant wants the international preliminary examination to be
based on the amended claims enclosed in this letter. **Rec'd PCT/PTO 30 DEC 2005**

The fee for the preliminary examination and the handling fee have been
paid by bank transfer, according to the enclosed Fee calculation sheet.

Yours faithfully,
BERGGREN OY AB



Matti Brax
Patent Agent

- Enclosures - Demand
- Annex (fee calculation sheet)
 - Copy of amendments under Article 19
 - Copy of statement under Article 19

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ SE

PCT

CHAPTER II

DEMAND

under Article 31 of the Patent Cooperation Treaty:

The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty.

For International Preliminary Examining Authority use only	
Identification of IPEA	Date of receipt of DEMAND
Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION	
Applicant's or agent's file reference BP106723	
International application No. PCT/FI2003/000529	International filing date (day/month/year) 30 June 2003 (30.06.2003)
(Earliest) Priority date (day/month/year) --	
Title of invention Faster fine timing operation in multi-carrier system	
Box No. II APPLICANT(S)	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) NOKIA CORPORATION Keilalahdentie 4 FI-02150 Espoo Finland	Telephone No.
	Facsimile No.
	Teleprinter No.
	Applicant's registration No. with the Office
State (that is, country) of nationality: FI	State (that is, country) of residence: FI
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) PALIN, Arto Rantatie 39 FI-37830 Viiala Finland	
State (that is, country) of nationality: FI	State (that is, country) of residence: FI
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	
State (that is, country) of nationality:	State (that is, country) of residence:
<input type="checkbox"/> Further applicants are indicated on a continuation sheet.	

Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCEThe following person is ☒ agent ☐ common representativeand ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination.☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.Name and address: *(Family name followed by given name; for a legal entity, full official designation.
The address must include postal code and name of country.)*Berggren Oy Ab
P.O. Box 16
FI-00101 Helsinki
Finland

Telephone No.

+358-9-693701

Facsimile No.

+358-9-6933944

Teleprinter No.

Agent's registration No. with the Office

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:***

1. The applicant wishes the international preliminary examination to start on the basis of:

☐ the international application as originally filedthe description ☒ as originally filed☐ as amended under Article 34the claims ☐ as originally filed☒ as amended under Article 19 (together with any accompanying statement)☐ as amended under Article 34the drawings ☒ as originally filed☐ as amended under Article 342. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of the applicable time limit under Rule 69.1(d).4. ☒ The applicant expressly wishes the international preliminary examination to start earlier than at the expiration of the applicable time limit under Rule 54bis.1(a).

* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English

☒ which is the language in which the international application was filed.☐ which is the language of a translation furnished for the purposes of international search.☐ which is the language of publication of the international application.☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.**Box No. V ELECTION OF STATES**

The filing of this demand constitutes the election of all Contracting States which are designated and are bound by Chapter II of the PCT.

Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- | | | |
|--|---|----------|
| 1. translation of international application | : | sheets |
| 2. amendments under Article 34 | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | 8 sheets |
| 4. copy (or, where required, translation) of statement under Article 19 | : | 2 sheets |
| 5. letter | : | 2 sheets |
| 6. other (<i>specify</i>) | : | sheets |

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- | received | not received |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

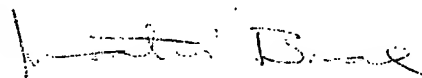
The demand is also accompanied by the item(s) marked below:

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> fee calculation sheet | 5. <input type="checkbox"/> statement explaining lack of signature |
| 2. <input type="checkbox"/> original separate power of attorney | 6. <input type="checkbox"/> sequence listing in computer readable form |
| 3. <input type="checkbox"/> original general power of attorney | 7. <input type="checkbox"/> tables in computer readable form related to a sequence listing |
| 4. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 8. <input type="checkbox"/> other (<i>specify</i>): |

Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

Berggren Oy Ab



Matti Brax, Patent Agent

Helsinki, Finland, 16 March 2004

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

3. ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.

☐ The applicant has been informed accordingly.

4. ☐ The date of receipt of the demand is WITHIN the time limit of 19 months from the priority date as extended by virtue of Rule 80.5.

5. ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.

6. ☐ The date of receipt of the demand is AFTER the expiration of the time limit under Rule 54bis.1(a) and item 7 or 8, below, does not apply.

7. ☐ The date of receipt of the demand is WITHIN the time limit under Rule 54bis.1(a) as extended by virtue of Rule 80.5.

8. ☐ Although the date of receipt of the demand is after the expiration of the time limit under Rule 54bis.1(a), the delay in arrival is EXCUSED pursuant to Rule 82.

For International Bureau use only

Demand received from IPEA on:

PCT

FEE CALCULATION SHEET

Annex to the Demand

International application No. PCT/FI2003/000529	For International Preliminary Examining Authority use only
Applicant's or agent's file reference BP106723	Date stamp of the IPEA
Applicant NOKIA CORPORATION et al.	
CALCULATION OF PRESCRIBED FEES	
1. Preliminary examination fee	SEK 5000 P
2. Handling fee (<i>Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee.</i>)	SEK 1160 H
3. Total of prescribed fees Add the amounts entered at P and H and enter total in the TOTAL box	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> SEK 6160 </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> TOTAL </div>
MODE OF PAYMENT	
<input type="checkbox"/> authorization to charge deposit account with the IPEA (see below)	<input type="checkbox"/> cash
<input type="checkbox"/> cheque	<input type="checkbox"/> revenue stamps
<input type="checkbox"/> postal money order	<input type="checkbox"/> coupons
<input checked="" type="checkbox"/> bank draft	<input type="checkbox"/> other (specify):
AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNT <i>(This mode of payment may not be available at all IPEAs)</i>	
<input type="checkbox"/> Authorization to charge the total fees indicated above.	IPEA/ _____
<input type="checkbox"/> <i>(This check-box may be marked only if the conditions for deposit accounts of the IPEA so permit)</i> Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.	Deposit Account No.: _____
	Date: _____
	Name: _____
	Signature: _____